Remarks

Sent by: NATIONAL STARCH

Claims 11 and 16 - 22 are pending in this application. Claims 11 and 18 have been allowed, claims 19 - 22 have been withdrawn and claims 16 and 17 have been rejected in the current Office Action.

Claims 16 and 17 were rejected under 35 U.S.C. 112, second paragraph. Claims 16 and 17 have been cancelled. Accordingly, it is respectfully requested that the Examiner withdraw the rejection under 35 U.S.C. 112, second paragraph.

Claim 11 has been amended to include polyvinyl alcohol. In the rejection of claim 17 the Examiner noted that DE 44 02 408 discloses silanol group containing polymers that become protected with polyvinyl alcohol. It is respectfully submitted that the disclosure of the present invention is distinguishable from that of DE '408. DE '408 states that "during the copolymerization of Si-containing monomers a dispersion of particles is obtained, where the organopolymer is bound at least partially through the C-Si-O-Si bonds with the organosilicium compound in the form of graft copolymers. With polymerization without Si-containing monomers, the organosilicium compounds and the organopolymer are often in the form of interpenetrating networks." Thus, if Si-containing monomers are present they are copolymerized as normal through radical emulsion polymerization. Therefore, in the first step the following occurs: M-M-M-M-Si(OR)-M-M-M-... where M stands for polymerized monomer units and Si(OR) stands for the Si-containing monomer, polymerized through the olefinic bond. R may be H (if already hydrolyzed) or an organic, defined by the monomer. In the second step, the Si-O-R bond can be hydrolyzed to obtain Si-OH (if that did not already occur). In the third step, the Si-OH condenses with another Si-OH group (e.g., coming from a monomer). This olefinic group of this monomer can further radically polymerize. Thus, graft copolymers with the formula C-Si-O-Si-C-Polymer are obtained. In contrast to DE '408, the invention of the present application the hydrolyzed Si-OH bonds are first reacted with a protected group (such as a polyof). Only during the application with the required pH adjustment (such as in the mortar) is the protected group separated, as shown in Equation 5 on page 9, to form a covalent bond with the mortar matrix: Polymer-Si-O-Si-Matrix (Equation 2, page 4) where Matrix means an inorganic matrix. Thus, the structure is distinguishable from that of DE '408.

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In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance. If there are any issues that the Examiner wishes to discuss, he is invited to contact the undersigned attorney at the telephone number set forth below.

Respectfully submitted

Charles W. Almer Reg. No.36,731

Tel. No. 908 707-3738

National Starch and Chemical Company 10 Finderne Avenue Bridgewater, NJ 08807 May 3, 2004